شرکت پتروشیمی بندرامام (سهامی عام)
BANDAR IMAM PETROCHEMICAL COMPANY
BIPC

Doc Name:	**Product Data sheet** **HDPE Production- 7000F**	1

Description:

7000F is a high molecular weight high density polyethylene Film grade copolymer which has a broad molecular weight distribution. The design of the product, molecular architecture and density, gives it a unique combination of easy extrusion and high melt strength with strong physical properties which makes it suitable for producing thin films with excellent strength and rigidity.

Application:

Film tackiness at 10-25 micron
Merchant bag
T-shirt bag
Disposal bag
Liner bag
Food contact applicable -complies US FDA 21 CFR 177. 1520

Typical Properties:

Typical Test	Units	Test Method	Spec
Melt Flow Index (190°C/2.16kg)	**gr/10 min**	**ASTM D-1238**	**0.04**
Melt Flow Index (190°C/5kg)	**gr/10 min**	**ASTM D-1238**	**0.20**
Density	**gr/cm^3**	**ASTM D-1505**	**0.953**
Vicat Softening Point	°C	ASTM D-1525	124
Melting Point	°C	ASTM D-2117	131
Tensile Strength @ Break	kg.cm^2	ASTM D-882	MD: 620 * TD: 310 *
Tensile Strength @ Yield	kg.cm^2	ASTM D-882	MD: - * TD: 250 *
Elongation @ Break	%	ASTM D-882	MD:240 * TD: 450 *
Elmendorf Tear Strength	g	ASTM D-1922	MD:3 * TD: 80 *
Dart Impact Strength	g	ASTM D-1709	139 *
ESCR (F 50) **	hr	ASTM D-1693	> 400
Izod Impact Notched (23^{0}C)	Kg.cm/cm	ASTM D-256	30

Vicat softening point test is performed under loading condition.

** MD= Machine Direction TD= Transverse Direction (the film produced on pilot line 12-micron, BUR 5:1).*

*** Condition B , Compression Molded , 25% Igepal.*

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Note: Bandar Imam Petrochemical Company only guarantees MFI and Density.

Processing method:

Actual extrusion condition depends on the type of using machine, size and film tackiness Recommend melt temperature 195 – 215 ℃, frost line Height: 6-8 times die Ø.

Producer:

Bandar Imam Petrochemical Co.

Licensor:

Mitsui chemicals.

Features:

7000 F is a HDPE resin produced via slurry process technology is suitable for Film 10- 25 micron and have low gel content, High stiffness, Good impact resistance and processability.

Product Available Form and Packaging:

The product is supplied in palletized 25 kg bags

Storage:

7000 F should be stored in dry and away from sources of heat and light. Please consult the safety data sheet for more information.

Safety:

Molten polymers could be injured skin or eye so safety glasses and appropriate gloves are suggested to prevent possible thermal injuries. Also, appropriate ventilation is suggested in working by melt polymer. Accumulation of fines or dust particles that are in this grade is not

suitable because of explosion hazard probability. So adequate filters and grounding exists at all time are recommended.

Recycling:

Refer to HDPE Material Safety Data Sheet

Related Documents

Refer to HDPE Material Safety Data Sheet

Technical Datasheet
7000F

1) Product Description:
HDPE 7000F is a high density polyethylene film grade.

2) Applications:
• Enhanced ultra thin film.

3) Typical data:

PROPERTY	TEST METHOD	UNIT	TYPICAL VALUE*
Density (23ºC)	ISO 1183	g/cm^3	0.952
Melt Flow Rate (190ºC/2.16kg)	ASTM D 1238	g/10min	0.04
Melt Flow Rate (190ºC/21.6kg)	ASTM D 1238	g/10min	--
Stress at Yield Point	ASTM D 638	Kg/cm^2	250
Stress at Break	ASTM D 638	Kg/cm^2	390
Elongation at Break	ASTM D 638	%	Above 500
Izod Impact	ASTM D 256	Kg.cm/cm	30
Stress Cracking Resistance	ASTM D 1693	hr	Above 600
Melting Point	ASTM D 2117	ºC	131

* Typical values not to be construed as specifications.

ILAM PETROCHEMICAL CO

ILPC HDPE 7000F

HIGH DENSITY POLYETHYLENE

DESCRIPTION

HD-7000F is a high molecular weight, high density polyethylene copolymer which has a broad molecular weight distribution. The design of the product, molecular architecture and density, gives it a unique combination of easy extrusion and high melt strength with strong physical properties which makes it suitable for producing thin films with excellent strength and rigidity.

TYPICAL APPLICATIONS

HD- 7000F is recommended for blown film extrusion. This product is suggested for the manufacture of high strength grocery sacks, shopping bags and high-quality thin films for multi-wall sack liners and replacement for thin paper products. Films produced with this product can be readily treated and printed to give high quality graphics.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES (1)			
Melt Flow Rate (MFR)			
at 190°C and 5 kg load	0.04	g/10 min	ISO 1133
Density at 23°C (1)	952	kg/m³	ISO 1183
MECHANICAL PROPERTIES (2)			
Tensile Stress at Yield	27	MPa	ISO 527-1/-2
Tensile Stress at Break	>24	MPa	ISO 527-1/-2
Elongation at Break	>500	%	ISO 527-1/-2
Charpy Impact strength	NB	kJ/m²	ISO 179-1
Shore hardness	64	D scale	ISO 868
Stress cracking resistance	>600	Hr	ASTM 1693
Vicat softening temperature	131	ºC	ISO 11357
Melting temperature	124	ºC	ISO 306

(1) Typical values: not to be construed as specification limits.

(2) Based on compression molded sheet. Compression molding of test specimen according to ISO 1872-2 Conditioning of test specimen: temp. 23 °C, relative humidity 50 %, 24 hours

PROCESSING CONDITIONS

Typical processing conditions for HD-7000F are:

- Melt Temperature: 200 - 215°C
- Frost line Height: 6-8 times die Ø

STORAGE AND HANDLING

Polyethylene material should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably don't exceed 50°C. ILPC would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance.

Packaging

25 kg bag ,1375 Kg shrink film palletized.

Complex Address: Ilam, Chavar, IlamPetrochemical company
Address: Tehran, Sheykh Bahaiee Sq., No. 18, 5th floor of Rayan Vanak Building - Ilam Petrochemical Co.
Email: info@ilamPetro.com Web site: www.ilampetro.com

Revision 2024-01

MEHR PETROCHEMICAL COMPANY
HIGH DENSITY POLYETHYLENE TECHNICAL DATASHEET

7000F (FILM GRADE)

PRODUCT DESCRIPTION

7000F is a high density polyethylene resin ;a product of bi-modal process from Mitsui Chemicals, Inc. of Japan

TYPICAL APPLICATION

- Recommend film thickness at 10-25 micron
- High tensile strength with good dart impact strength
- Low gel content
- Good moisture barrier
- Food contact applicable
- Good impact resistance and processability
- Shopping bag and T-shirt bag
- Garbage bag
- Liner bag
- Enhanced ultra thin film
- High stiffness
- Wide service Temperature range, UV resistance

PROPERTIES

Physical properties

Property	Test Method	Value	Unit
Resin Properties			
Melt Flow Rate	ASTM D 1238 @ 190 °C, 2.16 kg	0.03-0.05	g/10 min
Density	ASTM D 1505	0.950-0.954	g/cm3
Melting Point	ASTM D 2117	130 -140	°C
Vicat Softening Point	ASTM D 1525	124	°C
Brittleness Temperature	ASTM D 746	< -60	°C
ESCR	ASTM D 1693 @ 50 °C	> 1000	hrs, F50
	(Condition: Compression Molded, 25% Igepal)		
Film Properties			
Tensile Strength at Yield	ASTM D 638 @ crosshead speed 50mm/min	MD: 380*, TD: 250*	kg/cm2
Tensile Strength at Break	ASTM D 638 @ crosshead speed 50mm/min	MD: 620*, TD: 310*	kg/cm2
Tensile Modulus, 2% Secant	ASTM D 638 @ crosshead speed 50mm/min	MD: 8200*, TD: 8000*	kg/cm2
Elongation at Break	ASTM D 638 @ crosshead speed 50mm/min	MD : 240*, TD : 450*	%
Elmendorf Tear Strength	ASTM D 1922	MD : 3*, TD : 80*	g
Dart Impact Strength	ASTM D 1709	139*	g
Gloss	ASTM D 2457	5.8	GU
Haze	ASTM D1003	85.5	%

(*) Properties obtained from film produced on a pilot line , 10 micron, BUR 5:1, MD = Machine Direction, TD = Transverse Direction

Note : Conversion factor for changing unit from kg/cm2 to MPa is divided by 10.2

PROCESSING TECHNIQUES

The actual extrusion condition depends on type of using machine, size and film thickness of product required.

Generally, melt temperature should be 190-210 oC with BUR = 3-5 times and frost line height (FLH) = 8-10 times of die diameter.

Product Technical Assistance

For technical assistance or further information on this product contact MHPC technical team at the address or telephone number as specified below.

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E-mail: info@mehrpetrochem.com

MEHR PETROCHEMICAL COMPANY
HIGH DENSITY POLYETHYLENE TECHNICAL DATASHEET

7000F (FILM GRADE)

PRODUCT AVAILABLE FORM AND PACKAGING

◊ **Pellet**

◊ **25 kg loose bag**

◊ **Big bag with specified weight**

STORAGE

♦ Store in original container in tidy according to the manual of Handling and Storage from Mehr Petrochemical Company .

♦ Product(s) should be stored in dry and dust free location at temperature below 50oC and protected from direct sunlight and/or heat, well-ventilated area, away from incompatible materials and food and drink, as this may lead to quality deterioration, which results in odor generation and color changes and can have negative effects on the physical properties of this product.

♦ Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination

♦The storage area should be stable and not be slopped.

SAFETY

♦ The product is not classified as a hazardous material.

♦ Please see our Material Safety Data Sheet for details on various aspects of safety, recovery, and disposal of the products;

♦ For more information, contact Mehr Petrochemical company technical service.

RECYCLING

♦ The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling

♦ Please see our Material Safety Data Sheet for details on various aspects of safety, recovery, and disposal of the products.

♦ For more information, contact Mehr Petrochemical company technical service.

RELATED DOCUMENTS

The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the product.

♦ Material Safety Data Sheet

♦ Statement on compliance to food contact regulations

DISCLAIMER

♦ The product can be used only for the application as specified here above.

♦ To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication, however we do not assume any liability whatsoever for the accuracy and completeness of such information

♦ We make no warranties which extend beyond the description contained herein. Nothing herein shall constitute any implied warranty of merchantability or fitness for a particular purpose

♦ It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our product.

♦ No liability can be accepted in respect of the use of our products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials

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